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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,975	12/01/2008	Pascale Tardieu	ESSR:127US/10613593	7584
32425 7590 10/28/2010 FULBRIGHT & JAWORSKI L.L.P. 600 CONGRESS AVE. SUITE 2400 AUSTIN, TX 78701			EXAMINER PATEL, RONAK C	
			ART UNIT 1788	PAPER NUMBER
			NOTIFICATION DATE 10/28/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

aopatent@fulbright.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,975	<b>Applicant(s)</b> TARDIEU ET AL.	
	<b>Examiner</b> RONAK PATEL	<b>Art Unit</b> 1788	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08/24/2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 45-55, 57-59 and 62-71 is/are pending in the application.
- 4a) Of the above claim(s) 57-59, 62 and 67-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 45-55 and 63-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Applicant's election with traverse of claims 45-55, 63-66 in the reply filed on 08/24/2010 is acknowledged. The traversal is on the ground(s) that given that the special technical feature shared by the composition and method claims is not disclosed by the prior art. This is not found persuasive because In light of the amendment to the present claims, the shared special technical feature is now a colored latex layer comprising a mixture of an uncolored initial latex and at least one initial aqueous dispersion of at least one water-insoluble pigment being in the form of particles, wherein at least X% of the particles has a particle size L that is 370 nm or less in the initial aqueous dispersion, and X being equal to or greater than 90 and a coating composition comprising a swelling agent for the colored latex deposited onto the colored latex layer which is disclosed by Knox et al. (US 2005/0196626) in view of He et al. (US 2003/0082399) or Degand et al. (US 6489028), as set forth in paragraph 5-7 below.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 57-59, 62, 67-71 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claims, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 08/24/2010

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 45-51 and 63-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox et al. (US 2005/0196626) in view of He et al. (US 2003/0082399) and Degand et al. (US 6489028), further evidence by Hawley's Condensed Chemical Dictionary and Chen (US 2008/0311287)

5. Regarding claims 44-51, 63-66 Knox discloses a photochromic optical article comprising a rigid substrate and a photochromic organic polymeric coating (claim 1), where the photochromic organic polymeric coating is chosen from polyurethane based coating (claim 16) and inorganic particles, composite particles are also incorporated in to the photochromic polymer coating and such particles and an average particle size ranges from 5 to 50 nanometers prior to the incorporation into the composition (para 0083), which clearly suggests that the 100% of the particles have an average size 370 nm or less. The particles used in the photochromic polymeric coating is colloidal silica, which is aqueously dispersed, titanium oxide or mixtures thereof (para 0089) which acts as a pigment and also discloses that the particles will present in amounts less than 10 weight percent (para 0091), which meets the claim limitation that the pigment initial aqueous dispersion represent at most 10% by weight of claim 49. Knox also discloses colloidal silica particles are dispersed in water (para 0095). Knox discloses that the photochromic polymeric coating can be applied as water-borne coating as an aqueous polymer dispersion such as a latex (para 0159). Knox also discloses that the polychromatic polyurethane coating is specially preferred for use on transparent such as ophthalmic applications such as vision correcting lenses (para 0106-0109). Knox also

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discloses an embodiment where the photochromic articles such as ophthalmic lens, comprising a transparent organic plastic substrate and optically clear organic polymeric photochromic coating such as polyurethane based appended to atleast a portion of or atleast a surface of said plastic substrate (para 0017-0018). The photochromic coating applied to the surface of the plastic substrate will typically have a thickness of at least 10 microns (para 0118) and non limiting examples of organic substrates that can be used as polymeric organic substrates are polyurethanes, polythiourethanes (para 0102-0103), which meets the limitation of claim 65. Although, Knox does not expressly disclose the colored latex, but does disclose initial uncolored latex and a pigment. Thus, the initial uncolored latex and a pigment such as colloidal silica and Titanium oxide (white pigment) when they are mixed with each other, colored latex comprising uncolored latex and a pigment is formed. Although there is no explicit disclosure that the pigment is water insoluble, it is well-known, as evidenced by Hawley's Condensed Chemical Dictionary that Silica is water insoluble (page 995) and titanium oxide is water insoluble (<http://dictionary.reference.com/browse/titanium+dioxide>)

6. However, Knox fails to disclose that a coating composition comprising a swelling agent deposited on the colored latex layer. Whereas, He discloses an antireflective coating, the anti-reflective coating may have two layers (abstract). He discloses an apparatus comprising a substrate having a coating composition, while the coating composition is suitable for coating transparent substrates such as ophthalmic lens (para 0011). He discloses in figure 1 which has a substrate 110 and optionally formed over a surface of substrate 110 is hardcoat layer 115 (para 0014) , a first deposited layer 120

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(which acts as a latex layer of the present invention) where the first deposited layer comprises metal oxides such as titanium oxide (para 0015) and a second deposited layer 130 on the first deposited layer 120 which comprises an acrylate monomer (para 0020) and a solvent may further be added into formulation of second deposited layer wherein the solvent for the top coating composition may be a mixture of an alcohol solvent such as methanol and ethanol, a ketone which are swelling agents (para 0026).

Alternatively, Degand discloses an ophthalmic lens includes a substrate made of organic glass, at least one abrasion resistant coating and at least one primer layer inserted between the substrate and abrasion resistant coating, the primer layer (initial latex layer of the present invention) being formed from latex including at least one latex comprising butadiene units (abstract). The latex composition further comprises one or more latices that do not comprise butadiene units and are chosen from polyurethane latices and solid content (dry matter content) of the latices is from 10 to 80 wt% (claims 2-4). Degand also discloses that the abrasion resistant coating was prepared which comprised of methanol (col. 8, lines 25-28) which is identical to swelling agent used in the present invention. The motivation for using coating composition comprising a swelling agent such as alcohol and ketone or just alcohol by itself is to promote adhesion between the layer to a substrate (Chen US 2008/0311287, para 0057).

7. In light of the motivation of using coating composition comprising a swelling agent such as alcohol and ketone as taught by Chen as described above, it therefore would have been obvious to one of ordinary skill in the art at the time of invention to use the coating composition comprising a swelling agent of He or Degand on the colored

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latex layer of Knox motivated by the desire to have an excellent adhesion between the two layers.

9. Regarding claim 52, Knox fails to disclose that the latex has a dry matter content of from 20 to 50% by weight. However, Degand discloses an ophthalmic lens includes a substrate made of organic glass, at least one abrasion resistant coating and at least one primer layer inserted between the substrate and abrasion resistant coating, the primer layer being formed from latex including at least one latex comprising butadiene units (abstract). The latex composition further comprises one or more latices that do not comprise butadiene units and are chosen from polyurethane latices and solid content (dry matter content) of the latices is from 10 to 80 wt% (col. 3, lines 12-16 and claims 2-4). The motivation for having latex in a dry matter content of 10 to 80% is to maintain the viscosity and avoid partial coagulation of the resin

10. In light of the motivation of using the latex such as polyurethane with a solid content from 10 to 80 wt% as taught by Degand as discloses above, it therefore would have been obvious to one of ordinary skill in the art at the time of invention to use the latex particle with a solid content from 10 to 80 wt% of Degand in the colored latex layer of Knox to maintain the viscosity of the composition and to avoid partial coagulation of the composition.

11. Claims 53 and 55 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Knox et al. (US 2005/0196626), He et al. (US 2003/0082399) and Degand et al. (US 6489028), further in view of Vassal et al. (US 2004/0012002)

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12. Regarding claims 53 and 55, Knox in view of He fails to disclose that the initial latex particle are particles which size is less than 100 nm. However, Vassal discloses photochromic polyurethane coating (abstract) and also discloses ophthalmic article comprising an organic substrate with a surface coated with a film of photochromic material resulting from depositing and drying a polyurethane latex, where the article is ophthalmic lens (claims 26 and 28). The particle size of the polyurethane latex is from 50 to 300 nm (claim 25). The film of the photochromic material has a glass transition temperature of less than 0 C (claim 27). The motivation for having a particle size of 50 to 300 nm of polyurethane latex with a glass transition temperature of less than 0 C is to form an ophthalmic lens with avoiding risk of deterioration of the photochromic properties (para 0026) and improved photochromic properties (abstract)

13. In light of the motivation of having a particle size of 50 to 300 nm of polyurethane latex as taught by Vassal, it would be obvious to one of ordinary skill in the art at the time of invention to include the particle size of 50 nm of polyurethane latex with a glass transition temperature of less than 0 C in the polyurethane coating of Knox motivated by the desire to form ophthalmic lens with avoiding risk of deterioration of the photochromic properties (para 0026) and improved photochromic properties (abstract)

14. Claim 53-54 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Knox et al. (US 2005/0196626) and He et al. (US 2003/0082399) and Degand et al. (US 6489028), further in view of Vassal et al. (US 2004/0012002)

15. Regarding claims 53-54, Knox fails to disclose that the initial latex which is a polyurethane, 95 wt% has a particle size of less than 15 nm. Whereas, Farber discloses



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a process for improving the impact resistance of a coated plastic substrate and polyurethane dispersion as a primer layer to at least one surface of the plastic substrate (abstract), where transparent substrate used as an ophthalmic lens (para 0015). Farber discloses that the aqueous polyurethane dispersion has a solid content from about 5 to about 40 % and an average particle size is in the range of about 10 nm to about 100 nm (col. 4, lines 4-45).

16. It would be obvious to one of ordinary skill in the art at the time of invention to control the size of the particles by routine experimentation and include the particles where the 95wt% of the particles have a size of less than 15 nm in Farber in the colored latex layer comprising polyurethane latex of Knox motivated by the desire to form an ophthalmic lens with avoiding risk of deterioration of the photochromic properties (para 0026) and improved photochromic properties (abstract).

### ***Response to Arguments***

17. Applicant's arguments filed 08/24/2010 have been fully considered but they are not persuasive. Applicant argues that Examiner is using hindsight analysis by improperly picking and choosing from various portions of Knox's disclosure to support anticipation rejection and examiner ignored the wide variety of possible combinations disclosed in Knox and settled on a combination that is neither emphasized in the specification nor part of the example. However, it should be noted that Knox does not disclose a vast number of pigments from which to choose. Further, Knox explicitly discloses pigments such as colloidal silica, titanium oxide, cesium oxide and mixtures thereof. Therefore, absent evidence to the contrary, one of the ordinary skill in the art

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would be motivated to pick colloidal silica, titanium oxide mixed together with the polyurethane latex in the photochromic polymeric coating composition.

18. Applicant argues that Knox mentions that the colloidal silica is colorless as mentioned in para 0095 and resultant coating will be colorless. However, examiner has cited in the previous office action that inorganic particles are colloidal silica, titanium oxide and mixtures thereof as a pigment and mixing both of them together with uncolored latex would intrinsically give out colored latex layer. Further evidence is shown by <http://dictionary.reference.com/browse/titanium+dioxide> that Titanium oxide is white pigment and mixing white titanium oxide pigment with colloidal silica along with the uncolored latex would form colored latex layer. Further, while this paragraph discloses that silica is essentially colorless and therefore, can be used in coatings that are desired to be colorless and transparent, this does not limit the coating of Knox to colorless compositions. Given that Knox discloses the use of titanium dioxide, it is clear that the coatings of Knox can be colored.

### ***Conclusion***

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

20. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONAK PATEL whose telephone number is (571)270-1142. The examiner can normally be reached on Monday to Thursday 8 AM EST to 6PM EST.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. P./

Examiner, Art Unit 1788

10/20/2010

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1787